



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/715,790	11/18/2003	Douglas Deeds	042933/270321	4545

826 7590 08/23/2005

ALSTON & BIRD LLP
BANK OF AMERICA PLAZA
101 SOUTH TRYON STREET, SUITE 4000
CHARLOTTE, NC 28280-4000

EXAMINER

BALAOING, ARIEL A

ART UNIT	PAPER NUMBER
----------	--------------

2683

DATE MAILED: 08/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/715,790

Applicant(s)

DEEDS ET AL.

Examiner

Ariel Balaoing

Art Unit

2683

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-56 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-56 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claims 29 and 49 are objected to because of the following informalities: The sentences of claims 29 and 49 should end with periods. Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 12, 32, 52 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential elements, such omission amounting to a gap between the elements. See MPEP § 2172.01. The omitted elements are: Claims 12, 32, and 52 recite the limitation "a third color", however there is no mention of a first or second color in any of the dependant claims.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1, 6, 7, 21, 26, 27, 41, 46, and 47 are rejected under 35 U.S.C. 102(e) as being anticipated by LIAO et al (US 2003/0169460).

Regarding claim 1, LIAO discloses a terminal adapted to communicate via at least one communications system (abstract; paragraph 3, 4), wherein the terminal comprises: a transmitter and a receiver for transmitting and receiving signals (30-Figure 1), respectively, via the at least one communications system (100-Figure 2; paragraph 37); a display capable of visually representing an available bandwidth of a current communications system (40-Figure 1; paragraph 11, 47, 50); and a controller [processor] (24-Figure 1) capable of determining the available bandwidth of the current communications system and altering the appearance of the display based on a determination of the available bandwidth (paragraph 11).

Regarding claim 6, see the rejections of the parent claim concerning the subject matter this claim is dependant upon. LIAO further discloses wherein the controller is further capable of directing the display to visually represent the available bandwidth using a first icon corresponding to the available bandwidth (paragraph 11, 47, 50).

Regarding claim 7, see the rejections of the parent claim concerning the subject matter this claim is dependant upon. LIAO further discloses wherein the controller is further capable of directing the display to visually represent the available bandwidth using a first color corresponding to the available bandwidth (paragraph 11, 25, 47, 50).

Regarding claim 21, LIAO discloses a method of visually quantifying bandwidth on a terminal adapted to communicate via at least one communications system (abstract, paragraph 11), said method comprising: transmitting and receiving signals on at least one communications system (paragraph 37); determining an available bandwidth of a current communications system (paragraph 11, 47, 50); and controlling a

Art Unit: 2683

display of the terminal to visually represent the available bandwidth of the current communications system (paragraph 11, 47, 50).

Regarding claim 26, see the rejections of the parent claim concerning the subject matter this claim is dependant upon. LIAO further discloses wherein controlling the display of the terminal further comprises representing visually the available bandwidth using a first icon corresponding to the available bandwidth (paragraph 11, 47, 50).

Regarding claim 27, see the rejections of the parent claim concerning the subject matter this claim is dependant upon. LIAO further discloses wherein controlling the display of the terminal further comprises representing visually the available bandwidth using a first color corresponding to the available bandwidth (paragraph 11, 25, 47, 50).

Regarding claim 41, LIAO discloses a computer program product for visually quantifying bandwidth on a terminal adapted to transmit and receive signals on at least one communications system (paragraph 3, 4, 33), the computer program product comprising a computer-readable storage medium having computer-readable program code portions stored therein (paragraph 33), the computer-readable program code portions comprising: a first executable portion for determining an available bandwidth of a current communications system (abstract, paragraph 11, 47, 50); and a second executable portion for controlling a display of the terminal to visually represent the available bandwidth of the current communications system (paragraph 11, 47, 50).

Regarding claim 46, see the rejections of the parent claim concerning the subject matter this claim is dependant upon. LIAO further discloses wherein the second

Art Unit: 2683

executable portion is adapted to represent visually the available bandwidth using a first icon corresponding to the available bandwidth (paragraph 11, 47, 50).

Regarding claim 47, see the rejections of the parent claim concerning the subject matter this claim is dependant upon. LIAO further discloses wherein the second executable portion is adapted to represent visually the available bandwidth using a first color corresponding to the available bandwidth (paragraph 11, 25, 47, 50).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation

Art Unit: 2683

under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 2, 8, 9, 22, 28, 29, 42, 48 and 49 are rejected under 35 U.S.C. 103(a) as being unpatentable over LIAO et al (US 2003/0169460).

Regarding claim 2, see the rejections of the parent claim concerning the subject matter this claim depends upon. LIAO further discloses wherein the controller is further capable of determining a required bandwidth for transmitting and receiving signals on the current communications system (paragraph 28, 40, 67, 68). However, LIAO does not specifically disclose wherein the display is further capable of visually representing the required bandwidth for transmitting and receiving signals on the current communications system. LIAO discloses wherein the display is capable of displaying a determined quantity of bandwidth associated with a current communication system (paragraph 11, 25, 47). Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify LIAO to display the bandwidth determined necessary to transmit and receive signals, as LIAO also teaches calculating the bandwidth needed to transmit and receive to and from a communication system. This is beneficial in that manual adjustment of bandwidth usage can be determined by the visual display.

Regarding claim 8, see the rejections of the parent claims concerning the subject matter these claims are dependant upon. LIAO further discloses wherein the controller

Art Unit: 2683

is further capable of directing the display to visually represent the available bandwidth using a first icon corresponding to the available bandwidth (paragraph 11, 25) and wherein the controller is further capable of directing the display to visually represent a second bandwidth using a second icon corresponding to the second bandwidth (paragraph 11, 25). However, LIAO does not disclose wherein the second bandwidth is the required bandwidth. LIAO discloses wherein a required bandwidth calculation is made (paragraph 28, 40, 67, 68). Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify LIAO to display the bandwidth determined necessary to transmit and receive signals, as LIAO also teaches calculating the bandwidth needed to transmit and receive to and from a communication system. This is beneficial in that manual adjustment of bandwidth usage can be determined by the visual display.

Regarding claim 9, see the rejections of the parent claim concerning the subject matter this claim is dependant upon. LIAO further discloses wherein the controller is further capable of directing the display to visually represent the first icon in comparative relation to the second icon (paragraph 11, 25) such that the controller is further capable of directing the display to visually represent the available bandwidth in relation to the second bandwidth, respectively (paragraph 11, 25). However, LIAO does not specifically disclose wherein the second bandwidth corresponds to a required bandwidth. LIAO discloses wherein a required bandwidth calculation is made (paragraph 28, 40, 67, 68). Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify LIAO to display the

bandwidth determined necessary to transmit and receive signals, as LIAO also teaches calculating the bandwidth needed to transmit and receive to and from a communication system. This is beneficial in that manual adjustment of bandwidth usage can be determined by the visual display.

Regarding claim 22, see the rejections of the parent claim concerning the subject matter this claim is dependant upon. LIAO further discloses further comprising: determining a required bandwidth for transmitting and receiving signals on the current communications system (paragraph 28, 40, 67, 68). However, LIAO does not specifically disclose controlling the display of the terminal to visually represent the required bandwidth for transmitting and receiving signals on the current communications system. LIAO discloses wherein the display is capable of displaying a determined quantity of bandwidth associated with a current communication system (paragraph 11, 25, 47). Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify LIAO to display the bandwidth determined necessary to transmit and receive signals, as LIAO also teaches calculating the bandwidth needed to transmit and receive to and from a communication system. This is beneficial in that manual adjustment of bandwidth usage can be determined by the visual display.

Regarding claim 28, see the rejections of the parent claims concerning the subject matter these claims are dependant upon. LIAO further discloses wherein controlling the display of the terminal further comprises: representing visually the available bandwidth using a first icon corresponding to the available bandwidth

Art Unit: 2683

(paragraph 11, 25); and representing visually a second bandwidth using a second icon corresponding to the second bandwidth (paragraph 11, 25). However, LIAO does not disclose wherein the second bandwidth is the required bandwidth. LIAO discloses wherein a required bandwidth calculation is made (paragraph 28, 40, 67, 68). Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify LIAO to display the bandwidth determined necessary to transmit and receive signals, as LIAO also teaches calculating the bandwidth needed to transmit and receive to and from a communication system. This is beneficial in that manual adjustment of bandwidth usage can be determined by the visual display.

Regarding claim 29, see the rejections of the parent claims concerning the subject matter these claims are dependant upon. LIAO further discloses wherein controlling the display of the terminal further comprises representing visually the first icon in comparative relation to the second icon (paragraph 11, 25).

Regarding claim 42, see the rejections of the parent claim concerning the subject matter this claim is dependant upon. LIAO further discloses further comprising: a third executable portion for determining a required bandwidth for transmitting and receiving signals on the current communications system (paragraph 28, 40, 67, 68). However, LIAO does not disclose a fourth executable portion for controlling the display of the terminal to visually represent the required bandwidth for transmitting and receiving signals on the current communications system. LIAO discloses wherein the display is capable of displaying a determined quantity of bandwidth associated with a current communication system (paragraph 11, 25, 47). Therefore it would have been obvious

Art Unit: 2683

to a person of ordinary skill in the art at the time the invention was made to modify LIAO to display the bandwidth determined necessary to transmit and receive signals, as LIAO also teaches calculating the bandwidth needed to transmit and receive to and from a communication system. This is beneficial in that manual adjustment of bandwidth usage can be determined by the visual display.

Regarding claim 48, see the rejections of the parent claims concerning the subject matter these claims are dependant upon. LIAO further discloses wherein the second executable portion is adapted to represent visually the available bandwidth using a first icon corresponding to the available bandwidth (paragraph 11, 25) and wherein the fourth executable portion is adapted to represent visually a second bandwidth using a second icon corresponding to a second bandwidth. (paragraph 11, 25). However, LIAO does not disclose wherein the second bandwidth is the required bandwidth. LIAO discloses wherein a required bandwidth calculation is made (paragraph 28, 40, 67, 68). Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify LIAO to display the bandwidth determined necessary to transmit and receive signals, as LIAO also teaches calculating the bandwidth needed to transmit and receive to and from a communication system. This is beneficial in that manual adjustment of bandwidth usage can be determined by the visual display.

Regarding claim 49, see the rejections of the parent claims concerning the subject matter these claims are dependant upon. LIAO further discloses wherein the

Art Unit: 2683

second and fourth executable portions are adapted to represent visually the first icon in comparative relation to the second icon (paragraph 11, 25)

10. Claims 3, 4, 11, 13, 14, 23, 24, 31, 33, 34, 43, 44, 51, 53 and 54 are rejected under 35 U.S.C. 103(a) as being unpatentable over LIAO et al (US 2003/0169460) in view of KO et al (US 2004/0048624).

Regarding claim 3 and 4, see the rejections of the parent claims concerning the subject matter these claims are dependant upon. However, LIAO does not disclose wherein the terminal is adapted to communicate via a plurality of different communications systems, wherein the controller is further capable of determining the current communications system on which the terminal is transmitting and receiving signals, and wherein the display is further capable of visually representing the current communications system on which the terminal is transmitting and receiving signals. KO discloses wherein the terminal adapted to communicate via a plurality of different communications systems (paragraph 51, 58), wherein the controller is further capable of determining the current communications system on which the terminal is transmitting and receiving signals (paragraph 51, 58), and wherein the display is further capable of visually representing the current communications system on which the terminal is transmitting and receiving signals (paragraph 51, 58). Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify LIAO to include the ability to communicate to different communication systems and display current communication system, as taught by KO as both systems relate to

Art Unit: 2683

signal transmission to a portable device. This is beneficial in that it allows LIAO to be notified when roaming on a different communication system.

Regarding claim 11, see the rejections of the parent claim concerning the subject matter this claim is dependant upon. LIAO further discloses wherein the controller is further capable of directing the display to visually represent the available bandwidth using a first icon corresponding to the available bandwidth (paragraph 11, 47, 50).

Regarding claim 13, see the rejections of the parent claim concerning the subject matter this claim is dependant upon. LIAO further discloses wherein the controller is further capable of directing the display to visually represent the available bandwidth using a first icon corresponding to the available bandwidth (paragraph 11, 25) and wherein the controller is further capable of directing the display to visually represent a second bandwidth using a second icon corresponding to the second bandwidth (paragraph 11, 25). However, LIAO does not disclose wherein the second bandwidth is the required bandwidth. LIAO discloses wherein a required bandwidth calculation is made (paragraph 28, 40, 67, 68). Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify LIAO to display the bandwidth determined necessary to transmit and receive signals, as LIAO also teaches calculating the bandwidth needed to transmit and receive to and from a communication system. This is beneficial in that manual adjustment of bandwidth usage can be determined by the visual display.

Regarding claim 14, see the rejections of the parent claim concerning the subject matter this claim is dependant upon. LIAO further discloses LIAO further discloses

Art Unit: 2683

wherein the controller is further capable of directing the display to visually represent the first icon in comparative relation to the second icon (paragraph 11, 25) such that the controller is further capable of directing the display to visually represent the available bandwidth in relation to the second bandwidth, respectively (paragraph 11, 25).

However, LIAO does not specifically disclose wherein the second bandwidth corresponds to a required bandwidth. LIAO discloses wherein a required bandwidth calculation is made (paragraph 28, 40, 67, 68). Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify LIAO to display the bandwidth determined necessary to transmit and receive signals, as LIAO also teaches calculating the bandwidth needed to transmit and receive to and from a communication system. This is beneficial in that manual adjustment of bandwidth usage can be determined by the visual display.

Regarding claim 23 and 24, see the rejections of the parent claims concerning the subject matter these claim are dependant upon. However, LIAO does not disclose further comprising: determining a type of the current communications system on which the terminal is transmitting and receiving signals; and controlling the display of the terminal to visually represent the type of the current communications system on which the terminal is transmitting and receiving signals. KO discloses further comprising: determining a type of the current communications system on which the terminal is transmitting and receiving signals (paragraph 51, 58); and controlling the display of the terminal to visually represent the type of the current communications system on which the terminal is transmitting and receiving signals (paragraph 51, 58). Therefore it would

Art Unit: 2683

have been obvious to a person of ordinary skill in the art at the time the invention was made to modify LIAO to include the ability to communicate to different communication systems and display current communication system, as taught by KO as both systems relate to signal transmission to a portable device. This is beneficial in that it allows LIAO to be notified when roaming on a different communication system.

Regarding claim 31, see the rejections of the parent claim concerning the subject matter this claim is dependant upon. LIAO further discloses wherein controlling the display of the terminal further comprises representing visually the available bandwidth using a first icon corresponding to the available bandwidth (paragraph 11, 47, 50).

Regarding claim 33, see the rejections of the parent claim concerning the subject matter this claim is dependant upon. LIAO further discloses wherein controlling the display of the terminal further comprises: representing visually the available bandwidth using a first icon corresponding to the available bandwidth (paragraph 11, 25); and representing visually a second bandwidth using a second icon corresponding to the second bandwidth (paragraph 11, 25). However, LIAO does not disclose wherein the second bandwidth is the required bandwidth. LIAO discloses wherein a required bandwidth calculation is made (paragraph 28, 40, 67, 68). Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify LIAO to display the bandwidth determined necessary to transmit and receive signals, as LIAO also teaches calculating the bandwidth needed to transmit and receive to and from a communication system. This is beneficial in that manual adjustment of bandwidth usage can be determined by the visual display.

Regarding claim 34, see the rejections of the parent claim concerning the subject matter this claim is dependant upon. LIAO further discloses wherein controlling the display of the terminal further comprises representing visually the first icon in comparative relation to the second icon (paragraph 11, 25).

Regarding claim 43 and 44, see the rejections of the parent claim concerning the subject matter this claims are dependant upon. However, LIAO does not disclose further comprising: an executable portion for determining a type of the current communications system on which the terminal is transmitting and receiving signals; and an executable portion for controlling the display to visually represent the type of the current communications system on which the terminal is transmitting and receiving signals. KO discloses further comprising: an executable portion for determining a type of the current communications system on which the terminal is transmitting and receiving signals (paragraph 51, 58); and an executable portion for controlling the display to visually represent the type of the current communications system on which the terminal is transmitting and receiving signals (paragraph 51, 58). Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify LIAO to include the ability to communicate to different communication systems and display current communication system, as taught by KO as both systems relate to signal transmission to a portable device. This is beneficial in that it allows LIAO to be notified when roaming on a different communication system.

Regarding claim 51, see the rejections of the parent claim concerning the subject matter this claim is dependant upon. LIAO further discloses wherein the second

Art Unit: 2683

executable portion is adapted to represent visually the available bandwidth using a first icon corresponding to the available bandwidth (paragraph 11, 47, 50).

Regarding claim 53, see the rejections of the parent claim concerning the subject matter this claim is dependant upon. LIAO further discloses wherein the second executable portion is adapted to represent visually the available bandwidth using a first icon corresponding to the available bandwidth (paragraph 11, 25) and wherein the fourth executable portion is adapted to represent visually a second bandwidth using a second icon corresponding to a second bandwidth (paragraph 11, 25). However, LIAO does not disclose wherein the second bandwidth is the required bandwidth. LIAO discloses wherein a required bandwidth calculation is made (paragraph 28, 40, 67, 68). Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify LIAO to display the bandwidth determined necessary to transmit and receive signals, as LIAO also teaches calculating the bandwidth needed to transmit and receive to and from a communication system. This is beneficial in that manual adjustment of bandwidth usage can be determined by the visual display.

Regarding claim 54, see the rejections of the parent claims concerning the subject matter these claims are dependant upon. LIAO further discloses wherein the second and fourth executable portions are adapted to represent visually the first icon in comparative relation to the second icon (paragraph 11, 25)

11. Claims 5, 25, and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over LIAO et al (US 2003/0169460) in view of ARSENAULT et al (US 6,501,770 B2).

Regarding claim 5, see the rejections of the parent claim concerning the subject matter this claim is dependant upon. LIAO further discloses wherein the controller is further capable of directing the display to separately visually represent bandwidths (paragraphs 11, 25). However, LIAO does not disclose wherein the controller is capable of separately determining the bandwidth available for signal transmission and the bandwidth available for signal reception, and wherein the controller is further capable of directing the display to separately visually represent the respective bandwidths available for signal transmission and signal reception. ARSENAULT discloses wherein the controller is capable of separately determining the bandwidth available for signal transmission and the bandwidth available for signal reception (abstract, column 27:lines 26-43), and wherein the controller is further capable of separately representing the respective bandwidths available for signal transmission and signal reception (abstract, column 27:lines 26-43). Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify LIAO to include the ability to separately determine transmission and reception bandwidths, as taught by ARSENAULT, as both systems deal with bandwidth optimization in an over the air communication system. This is beneficial in that it allows manual adjustment of transmission and reception rates using a visual display.

Regarding claim 25, see the rejections of the parent claim concerning the subject matter this claim is dependent upon. LIAO further discloses wherein controlling the display comprises controlling the display to separately visually represent separate bandwidths available (paragraphs 11, 25). However, LIAO does not disclose wherein

Art Unit: 2683

determining the available bandwidth comprises separately determining the bandwidth available for signal transmission and the bandwidth available for signal reception, and wherein controlling the display comprises controlling the display to separately visually represent the respective bandwidths available for signal transmission and signal reception. ARSENAULT discloses wherein determining the available bandwidth comprises separately determining the bandwidth available for signal transmission and the bandwidth available for signal reception (abstract, column 27:lines 26-43), and representing the respective bandwidths available for signal transmission and signal reception (abstract, column 27:lines 26-43). Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify LIAO to include the ability to separately determine transmission and reception bandwidths, as taught by ARSENAULT, as both systems deal with bandwidth optimization in an over the air communication system. This is beneficial in that it allows manual adjustment of transmission and reception rates using a visual display.

Regarding claim 45, see the rejections of the parent claim concerning the subject matter this claim is dependant upon. LIAO further discloses wherein said second executable portion is capable of controlling the display to separately visually represent the respective bandwidths available (paragraph 11, 25). However, LIAO does not disclose wherein said first executable portion is capable of separately determining the bandwidth available for signal transmission and the bandwidth available for signal reception, and wherein said second executable portion is capable of controlling the display to separately visually represent the respective bandwidths available for signal

Art Unit: 2683

transmission and signal reception. ARSENAULT discloses wherein said first executable portion is capable of separately determining the bandwidth available for signal transmission and the bandwidth available for signal reception (abstract, column 27:lines 26-43), and wherein said second executable portion is capable of representing the respective bandwidths available for signal transmission and signal reception (abstract, column 27:lines 26-43). Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify LIAO to include the ability to separately determine transmission and reception bandwidths, as taught by ARSENAULT, as both systems deal with bandwidth optimization in an over the air communication system. This is beneficial in that it allows manual adjustment of transmission and reception rates using a visual display.

12. Claims 10, 30, and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over LIAO et al (US 2003/0169460) in view of ROSENFLED (US 2004/0071081 A1).

Regarding claim 10, see the rejections of the parent claim concerning the subject matter this claim is dependant upon. LIAO further discloses wherein the controller is further capable of directing the display to visually represent the second icon in a second color used to indicate a value of a bandwidth (paragraph 11, 25). However, LIAO does not disclose that the bandwidth is a ratio of the required bandwidth to the available bandwidth. ROSENFLED discloses calculating a ratio of the required bandwidth to the available bandwidth (paragraphs 27-30). There fore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify LIAO to

include a method of calculating a ratio of the required bandwidth to the available bandwidth, as taught by ROSENFLED, as both systems relate to bandwidth regulation. This is beneficial in that a ratio of required bandwidth to available bandwidth would provide a visual display of system load capacity.

Regarding claim 30, see the rejections of the parent claim concerning the subject matter this claim is dependant upon. LIAO further discloses wherein controlling the display of the terminal further comprises: calculating a ratio of the required bandwidth to the available bandwidth; and representing visually the second icon in a second color used to indicate a value of a bandwidth. However, LIAO does not disclose that the bandwidth is a ratio of the required bandwidth to the available bandwidth. ROSENFLED discloses calculating a ratio of the required bandwidth to the available bandwidth (paragraphs 27-30). There fore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify LIAO to include a method of calculating a ratio of the required bandwidth to the available bandwidth, as taught by ROSENFLED, as both systems relate to bandwidth regulation. This is beneficial in that a ratio of required bandwidth to available bandwidth would provide a visual display of system load capacity.

Regarding claim 50, see the rejections of the parent claim concerning the subject matter this claim is dependant upon. LIAO further discloses further comprising a fifth executable portion for calculating a ratio of the required bandwidth to the available bandwidth, and wherein the fourth executable portion is adapted to represent visually the second icon in a second color used to indicate a bandwidth calculated by the fifth

Art Unit: 2683

executable portion. However, LIAO does not disclose that the bandwidth is a ratio of the required bandwidth to the available bandwidth. ROSENFLED discloses calculating a ratio of the required bandwidth to the available bandwidth (paragraphs 27-30). Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify LIAO to include a method of calculating a ratio of the required bandwidth to the available bandwidth, as taught by ROSENFLED, as both systems relate to bandwidth regulation. This is beneficial in that a ratio of required bandwidth to available bandwidth would provide a visual display of system load capacity.

13. Claims 15, 35, 55 are rejected under 35 U.S.C. 103(a) as being unpatentable over LIAO et al (US 2003/0169460) in view of KO et al (US 2004/0048624) and further in view of ROSENFLED (US 2004/0071081).

Regarding claim 15, see the rejections of the parent claim concerning the subject matter this claim is dependant upon. LIAO further discloses wherein the controller is further capable of directing the display to visually represent the second icon in a second color used to indicate a value of a bandwidth (paragraph 11, 25). However, the combination of LIAO and KO does not disclose that the bandwidth is a ratio of the required bandwidth to the available bandwidth. ROSENFLED discloses calculating a ratio of the required bandwidth to the available bandwidth (paragraphs 27-30). Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify combination of LIAO and KO to include a method of calculating a ratio of the required bandwidth to the available bandwidth, as taught by

ROSENFLED, as both systems relate to bandwidth regulation. This is beneficial in that a ratio of required bandwidth to available bandwidth would provide a visual display of system load capacity.

Regarding claim 35, see the rejections of the parent claim concerning the subject matter this claim is dependant upon. LIAO further discloses wherein controlling the display of the terminal further comprises: calculating a ratio of the required bandwidth to the available bandwidth; and representing visually the second icon in a second color used to indicate a value of a bandwidth. However, the combination of LIAO and KO does not disclose that the bandwidth is a ratio of the required bandwidth to the available bandwidth. ROSENFLED discloses calculating a ratio of the required bandwidth to the available bandwidth (paragraphs 27-30). There fore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the combination of LIAO and KO to include a method of calculating a ratio of the required bandwidth to the available bandwidth, as taught by ROSENFLED, as both systems relate to bandwidth regulation. This is beneficial in that a ratio of required bandwidth to available bandwidth would provide a visual display of system load capacity.

Regarding claim 55, see the rejections of the parent claim concerning the subject matter this claim is dependant upon. LIAO further discloses further comprising a seventh executable portion for calculating a ratio of the required bandwidth to the available bandwidth, and wherein the fourth executable portion is adapted to represent visually the second icon in a second color used to indicate a bandwidth calculated by the seventh executable portion. However, the combination of LIAO and KO does not

disclose that the bandwidth is a ratio of the required bandwidth to the available bandwidth. ROSENFLED discloses calculating a ratio of the required bandwidth to the available bandwidth (paragraphs 27-30). Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the combination of LIAO and KO to include a method of calculating a ratio of the required bandwidth to the available bandwidth, as taught by ROSENFLED, as both systems relate to bandwidth regulation. This is beneficial in that a ratio of required bandwidth to available bandwidth would provide a visual display of system load capacity.

14. Claims 12, 32, and 52 are rejected under 35 U.S.C. 103(a) as being unpatentable over LIAO et al (US 2003/0169460) in view of KO et al (US 2004/0048624) and further in view of ZANCHO (US 5,630,159).

Regarding claim 12, see the rejections of the parent claim concerning the subject matter this claim is dependant upon. KO further discloses wherein the controller is further capable of directing the display to visually represent the first icon used to indicate the type of the current communications system on which the terminal is transmitting and receiving signals (paragraph 51, 58). However, the combination of LIAO and KO does not disclose wherein the first icon is colored to distinguish communication systems. ZANCHO discloses wherein the icon is colored to distinguish communication systems (column 6:line 63-column 7:line18). Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the combination of LIAO and KO to include the ability to change icon color based on communication systems, as taught by ZANCHO, as both systems relate to

Art Unit: 2683

mobile device configuration. This is beneficial in that it allows the user the ability to configure the mobile device based on personal preferences.

Regarding claim 32, see the rejections of the parent claim concerning the subject matter this claim is dependant upon. KO further disclose wherein controlling the display of the terminal further comprises representing visually the first icon used to indicate the type of the current communications system on which the terminal is transmitting and receiving signals (paragraph 51, 58). However, the combination of LIAO and KO do not disclose wherein the first icon is colored to distinguish communication systems.

ZANCHO discloses wherein the icon is colored to distinguish communication systems (column 6:line 63-column 7:line18). Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the combination of LIAO and KO to include the ability to change icon color based on communication systems, as taught by ZANCHO, as both systems relate to mobile device configuration. This is beneficial in that it allows the user the ability to configure the mobile device based on personal preferences.

Regarding claim 52, see the rejections of the parent claim concerning the subject matter this claim is dependant upon. KO further discloses wherein the fourth executable portion is adapted to represent visually the first icon used to indicate the type of the current communications system on which the terminal is transmitting and receiving signals (paragraph 51, 58). However, the combination of LIAO and KO do not disclose wherein the first icon is colored to distinguish communication systems.

ZANCHO discloses wherein the icon is colored to distinguish communication systems

(column 6:line 63-column 7:line18). Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the combination of LIAO and KO to include the ability to change icon color based on communication systems, as taught by ZANCHO, as both systems relate to mobile device configuration. This is beneficial in that it allows the user the ability to configure the mobile device based on personal preferences.

15. Claims 16, 36 and 56 are rejected under 35 U.S.C. 103(a) as being unpatentable over LIAO et al (US 2003/0169460) in view of KO et al (US 2004/0048624) and ROSENFLED (US 2004/0071081) and further in view of ZANCHO (US 5,630,159).

Regarding claim 16, see the rejections of the parent claim concerning the subject matter this claim is dependant upon. KO further discloses wherein the controller is further capable of directing the display to visually represent the first icon used to indicate the type of the current communications system on which the terminal is transmitting and receiving signals (paragraph 51, 58). However, the combination of LIAO, KO and ROSENFLED does not disclose wherein the first icon is colored to distinguish communication systems. ZANCHO discloses wherein the icon is colored to distinguish communication systems (column 6:line 63-column 7:line18). Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the combination of LIAO, KO and ROSENFLED to include the ability to change icon color based on communication systems, as taught by ZANCHO, as both systems relate to mobile device configuration. This is beneficial in that it allows the user the ability to configure the mobile device based on personal preferences.

Regarding claim 36, see the rejections of the parent claim concerning the subject matter this claim is dependant upon. KO further disclose wherein controlling the display of the terminal further comprises representing visually the first icon used to indicate the type of the current communications system on which the terminal is transmitting and receiving signals (paragraph 51, 58). However, the combination of LIAO, KO and ROSENFLED do not disclose wherein the first icon is colored to distinguish communication systems. ZANCHO discloses wherein the icon is colored to distinguish communication systems (column 6:line 63-column 7:line18). Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the combination of LIAO, KO and ROSENFLED to include the ability to change icon color based on communication systems, as taught by ZANCHO, as both systems relate to mobile device configuration. This is beneficial in that it allows the user the ability to configure the mobile device based on personal preferences.

Regarding claim 52, see the rejections of the parent claim concerning the subject matter this claim is dependant upon. KO further discloses wherein the sixth executable portion is adapted to represent visually the first icon used to indicate the type of the current communications system on which the terminal is transmitting and receiving signals (paragraph 51, 58). However, the combination of LIAO, KO and ROSENFLED do not disclose wherein the first icon is colored to distinguish communication systems. ZANCHO discloses wherein the icon is colored to distinguish communication systems (column 6:line 63-column 7:line18). Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the combination

Art Unit: 2683

of LIAO, KO and ROSENFLED to include the ability to change icon color based on communication systems, as taught by ZANCHO, as both systems relate to mobile device configuration. This is beneficial in that it allows the user the ability to configure the mobile device based on personal preferences.

16. Claims 17, 18, 37 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over LIAO et al (US 2003/0169460) in view of WATANABE (US 6,233,469 B1).

Regarding claim 17, LIAO discloses a system comprising: a first terminal comprising a transmitter and a receiver for transmitting and receiving signals (30-Figure 1), respectively, via the at least one communications system (100-Figure 2; paragraph 37); a controller [processor] capable of determining the available bandwidth of the communications system utilized by said first terminal (paragraph 11, 25); and a display, responsive to said controller (40-Figure 1; paragraph 11, 47, 50), comprising a display capable of visually representing an available bandwidth of the communications system utilized by said first terminal (40-Figure 1; paragraph 11, 47, 50). However, LIAO does not disclose wherein the display is a separate terminal. WATANABE discloses wherein the display is a separate terminal (4-Figure 5; column 5:line 44-column 6:line 5; column 10:lines 12-24). Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify LIAO to include a separate display responsive to a first terminal, as taught by WATANABE, as both systems relate to mobile devices. This is beneficial in that providing a separate display allows viewing of the display while communicating on the mobile device.

Regarding claim 18, see the rejections of the parent claim concerning the subject matter this claim is dependant upon. LIAO further discloses wherein the controller is further capable of determining a required bandwidth for transmitting and receiving signals on the current communications system (paragraph 28, 40, 67, 68). However, LIAO does not specifically disclose wherein the display is further capable of visually representing the required bandwidth for transmitting and receiving signals on the current communications system by said first terminal. LIAO discloses wherein the display is capable of displaying a determined quantity of bandwidth associated with a current communication system (paragraph 11, 25, 47). Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify LIAO to display the bandwidth determined necessary to transmit and receive signals, as LIAO also teaches calculating the bandwidth needed to transmit and receive to and from a communication system. This is beneficial in that manual adjustment of bandwidth usage can be determined by the visual display. However, LIAO does not disclose wherein the display is a separate terminal. WATANABE discloses wherein the display is a separate terminal (4-Figure 5; column 5:line 44-column 6:line 5; column 10:lines 12-24). Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify LIAO to include a separate display responsive to a first terminal, as taught by WATANABE, as both systems relate to mobile devices. This is beneficial in that providing a separate display allows viewing of the display while communicating on the mobile device.

Regarding claim 37, LIAO discloses a method comprising: transmitting and receiving signals with a first terminal on the at least one communications system (paragraph 11, 25); determining an available bandwidth of the communications system utilized by the first terminal (paragraph 11, 25); and controlling a display to visually represent the available bandwidth of the communications system utilized by the first terminal (paragraph 11, 25). However, LIAO does not disclose wherein the display is a separate terminal. WATANABE discloses wherein the display is a separate terminal (4-Figure 5; column 5:line 44-column 6:line 5; column 10:lines 12-24). Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify LIAO to include a separate display responsive to a first terminal, as taught by WATANABE, as both systems relate to mobile devices. This is beneficial in that providing a separate display allows viewing of the display while communicating on the mobile device.

Regarding claim 38, see the rejections of the parent claim concerning the subject matter this claim is dependant upon. LIAO further discloses further comprising: determining a required bandwidth for transmitting and receiving signals on the current communications system (paragraph 28, 40, 67, 68). However, LIAO does not specifically disclose controlling the display of the terminal to visually represent the required bandwidth for transmitting and receiving signals on the current communications system. LIAO discloses wherein the display is capable of displaying a determined quantity of bandwidth associated with a current communication system (paragraph 11, 25, 47). Therefore it would have been obvious to a person of ordinary skill in the art at

Art Unit: 2683

the time the invention was made to modify LIAO to display the bandwidth determined necessary to transmit and receive signals, as LIAO also teaches calculating the bandwidth needed to transmit and receive to and from a communication system. This is beneficial in that manual adjustment of bandwidth usage can be determined by the visual display. However, LIAO does not disclose wherein the display is a separate terminal. WATANABE discloses wherein the display is a separate terminal (4-Figure 5; column 5:line 44-column 6:line 5; column 10:lines 12-24). Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify LIAO to include a separate display responsive to a first terminal, as taught by WATANABE, as both systems relate to mobile devices. This is beneficial in that providing a separate display allows viewing of the display while communicating on the mobile device.

17. Claims 19 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over LIAO et al (US 2003/0169460) in view of KO et al (US 2004/0048624), and in further view of WATANABE (US 6,233,469 B1).

Regarding claim 19, see the rejections of the parent claim concerning the subject matter these claim is dependant upon. However, LIAO does not disclose wherein the terminal is adapted to communicate via a plurality of different communications systems, wherein the controller is further capable of determining the current communications system on which the terminal is transmitting and receiving signals, and wherein the display is further capable of visually representing the current communications system on which the terminal is transmitting and receiving signals. KO discloses wherein the

Art Unit: 2683

terminal adapted to communicate via a plurality of different communications systems (paragraph 51, 58), wherein the controller is further capable of determining the current communications system on which the terminal is transmitting and receiving signals (paragraph 51, 58), and wherein the display is further capable of visually representing the current communications system on which the terminal is transmitting and receiving signals (paragraph 51, 58). Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify LIAO to include the ability to communicate to different communication systems and display current communication system, as taught by KO as both systems relate to signal transmission to a portable device. This is beneficial in that it allows LIAO to be notified when roaming on a different communication system. However, the combination of LIAO and KO does not disclose wherein the display is a separate terminal. WATANABE discloses wherein the display is a separate terminal (4-Figure 5; column 5:line 44-column 6:line 5; column 10:lines 12-24). Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the combination of LIAO and KO to include a separate display responsive to a first terminal, as taught by WATANABE, as both systems relate to mobile devices. This is beneficial in that providing a separate display allows viewing of the display while communicating on the mobile device.

Regarding claim 39, see the rejections of the parent claim concerning the subject matter this claim is dependent upon. However, LIAO does not disclose further comprising: determining a type of the current communications system on which the terminal is transmitting and receiving signals; and controlling the display of the terminal

Art Unit: 2683

to visually represent the type of the current communications system on which the terminal is transmitting and receiving signals. KO discloses further comprising: determining a type of the current communications system on which the terminal is transmitting and receiving signals (paragraph 51, 58); and controlling the display of the terminal to visually represent the type of the current communications system on which the terminal is transmitting and receiving signals (paragraph 51, 58). Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify LIAO to include the ability to communicate to different communication systems and display current communication system, as taught by KO as both systems relate to signal transmission to a portable device. This is beneficial in that it allows LIAO to be notified when roaming on a different communication system. However, the combination of LIAO and KO does not disclose wherein the display is a separate terminal. WATANABE discloses wherein the display is a separate terminal (4-Figure 5; column 5:line 44-column 6:line 5; column 10:lines 12-24). Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the combination of LIAO and KO to include a separate display responsive to a first terminal, as taught by WATANABE, as both systems relate to mobile devices. This is beneficial in that providing a separate display allows viewing of the display while communicating on the mobile device.

18. Claims 20 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over LIAO et al (US 2003/0169460) in view of ARSENAULT et al (US 6,501,770 B2), and further in view of WATANABE (US 6,233,469 B1).

Regarding claim 20, see the rejections of the parent claim concerning the subject matter this claim is dependant upon. LIAO further discloses wherein the controller is further capable of directing the display to separately visually represent bandwidths (paragraphs 11, 25). However, LIAO does not disclose wherein the controller is capable of separately determining the bandwidth available for signal transmission and the bandwidth available for signal reception, and wherein the controller is further capable of directing the display to separately visually represent the respective bandwidths available for signal transmission and signal reception. ARSENAULT discloses wherein the controller is capable of separately determining the bandwidth available for signal transmission and the bandwidth available for signal reception (abstract, column 27:lines 26-43), and wherein the controller is further capable of separately representing the respective bandwidths available for signal transmission and signal reception (abstract, column 27:lines 26-43). Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify LIAO to include the ability to separately determine transmission and reception bandwidths, as taught by ARSENAULT, as both systems deal with bandwidth optimization in an over the air communication system. This is beneficial in that it allows manual adjustment of transmission and reception rates using a visual display. However, the combination of LIAO and ARSENAULT does not disclose wherein the display is a separate terminal. WATANABE discloses wherein the display is a separate terminal (4-Figure 5; column 5:line 44-column 6:line 5; column 10:lines 12-24). Therefore it would have been obvious to a person of ordinary skill in the art at the time

Art Unit: 2683

the invention was made to modify the combination of LIAO and ARSENAULT to include a separate display responsive to a first terminal, as taught by WATANABE, as both systems relate to mobile devices. This is beneficial in that providing a separate display allows viewing of the display while communicating on the mobile device.

Regarding claim 40, see the rejections of the parent claim concerning the subject matter this claim is dependant upon. Regarding claim 25, see the rejections of the parent claim concerning the subject matter this claim is dependent upon. LIAO further discloses wherein controlling the display comprises controlling the display to separately visually represent separate bandwidths available (paragraphs 11, 25). However, LIAO does not disclose wherein determining the available bandwidth comprises separately determining the bandwidth available for signal transmission and the bandwidth available for signal reception, and wherein controlling the display comprises controlling the display to separately visually represent the respective bandwidths available for signal transmission and signal reception. ARSENAULT discloses wherein determining the available bandwidth comprises separately determining the bandwidth available for signal transmission and the bandwidth available for signal reception (abstract, column 27:lines 26-43), and representing the respective bandwidths available for signal transmission and signal reception (abstract, column 27:lines 26-43). Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify LIAO to include the ability to separately determine transmission and reception bandwidths, as taught by ARSENAULT, as both systems deal with bandwidth optimization in an over the air communication system. This is beneficial in that it allows

Art Unit: 2683

manual adjustment of transmission and reception rates using a visual display.

However, the combination of LIAO and ARSENAULT does not disclose wherein the display is a separate terminal. WATANABE discloses wherein the display is a separate terminal (4-Figure 5; column 5:line 44-column 6:line 5; column 10:lines 12-24).

Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the combination of LIAO and ARSENAULT to include a separate display responsive to a first terminal, as taught by WATANABE, as both systems relate to mobile devices. This is beneficial in that providing a separate display allows viewing of the display while communicating on the mobile device.

Conclusion

19. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

HALLORAN et al (US 5,966,667) – Dual-Mode communication device

WALDING (US 6,031,845) – Allocation of bandwidth to calls

KIKUCHI et al (US 6,614,763 B1) – Measuring network communication performances

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ariel Balaoing whose telephone number is (571) 272-7317. The examiner can normally be reached on Monday-Friday from 8:00 AM to 4:30 AM.

Art Unit: 2683

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Trost can be reached on (571) 272-7872. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ariel Balaoing
Art Unit 2683
Patent Examiner

AB


WILLIAM TROST
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600